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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

MAR 7, 1994

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

Barbara Brown  
DREXEL CHEMICAL CO.  
P. O. Box 9306  
Memphis, TN 38109

Subject: Label Amendment Submission of 07/13/93 in Response to PR Notice 93-7  
EPA Reg. No. 19713-46  
DREXEL SIMAZINE HERBICIDE 80 W

**IMPORTANT NOTICE:** This Letter Requires You to Submit a Notification to the Office of Compliance Monitoring within 20 Days.

Dear Registrant:

The labeling cited above and submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is accepted subject to the comments listed on the enclosed sheet. A copy of your proposed labeling stamped "ACCEPTED WITH COMMENTS" is enclosed.

**SERIOUS ERROR(S) ON SUBMITTED LABELING:**

EPA has determined that one or more of the errors on the labeling you submitted to the Agency is categorized as "serious" as defined in PR Notice 93-11. In general, serious errors are those that may create a potential for harm to workers, handlers, other persons, or the environment; or those that prevent the achievement of the basic goals of the Worker Protection Standard (WPS) or FIFRA.

**YOU MUST NOT SELL OR DISTRIBUTE (INCLUDING RELEASE FOR SHIPMENT) ANY PRODUCT BEARING THE SUBMITTED LABELING.** Sale or distribution of any product with the incorrect labeling is a violation of FIFRA that could result in initiation of an action for civil penalties and/or cancellation of your product. This matter has been referred to the Office of Compliance Monitoring (OCM) for further action.

**YOU MUST SUBMIT A NOTIFICATION TO THE OFFICE OF COMPLIANCE MONITORING WITHIN 20 DAYS OF THE DATE OF THIS LETTER.**



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contains at least 50% recycled fiber



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Each notification must include the following information:

1. Registrant's name and address.
2. EPA Registration number of the product for which the labeling was submitted.
3. Whether any product already has been sold or distributed (this includes released for shipment) bearing the submitted labeling.

In addition, the notification must include the following information, IF you have already sold or distributed any product bearing the submitted labeling:

1. Quantity of the product that has been sold or distributed.
2. EPA Producing Establishment number.
3. Location of the product, if known.
4. Proposed plan for assuring that product with the incorrect labeling in your control, as well as that in the hands of dealers/distributors/users, will be corrected. The plan must include your proposal for assuring that the labeling is corrected as soon as possible.

Submit the notification to:

Michael Wood, Director  
Compliance Division, (7203)  
Worker Protection Notification  
Office of Compliance Monitoring  
U.S. Environmental Protection Agency  
401 M Street SW  
Washington, DC 20460

Failure to submit a notification also may result in initiation of an action under FIFRA for civil penalties, if you sold or distributed (this includes released for shipment) product bearing the incorrect labeling.

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IN ADDITION, YOU SHOULD CONTACT IMMEDIATELY THE PERSONS TO WHOM YOU SOLD OR DISTRIBUTED YOUR PRODUCT AND INFORM THEM NOT TO SELL OR DISTRIBUTE ANY PRODUCT WITH THE INCORRECT LABELING.

**WHAT THIS ACCEPTANCE MEANS:**

Based on your certification, the Agency has accepted the labeling changes that are necessary to comply with the WPS labeling requirements of 40 CFR part 156, subpart K, described in PR Notices 93-7 and 93-11. Any other labeling changes submitted in connection with this amendment application but not directly related to compliance with the WPS have neither been reviewed nor accepted by the Agency. If you wish to make such changes, you must submit a separate amendment application proposing them. If your product is currently suspended, the acceptance of this labeling amendment does not affect the suspension in any way.

**WHAT YOU NEED TO DO NEXT:**

Submit the required notification. Then by the next label printing make all the specified changes to your labeling. Send to EPA one (1) copy of the final printed labeling:

- BEFORE selling or distributing any product bearing the final printed labeling as amended

**AND**

- WITHIN one year from date of this acceptance.

Submit the final printed labeling via the U.S. Postal Service to:

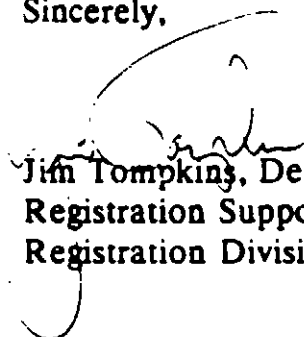
Document Processing Desk (FIN-LABEL)  
 Office of Pesticide Programs (7505C)  
 U.S. Environmental Protection Agency  
 401 M Street, SW  
 Washington, D.C. 20460-0001



Hand or courier deliveries of final labeling may be made to:

Document Processing Desk (FIN-LABEL)  
Office of Pesticide Programs  
Room 266A, Crystal Mall 2  
1921 Jefferson Davis Highway  
Arlington, VA 22202

Sincerely,



Jim Tompkins, Deputy Chief  
Registration Support Branch  
Registration Division (7505W)

Attachment

cc: Office of Compliance Monitoring

**BEST AVAILABLE COPY**

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Office of Pesticide Programs  
Registration Division

Barbara Brown  
DREXEL CHEMICAL CO  
BOX 9306  
MEMPHIS TN 38109

Comment for: EPA Reg Nr.19713-46  
DREXEL SIMAZINE HERBICIDE 80 W

The following specific comments pertain to your WPS labeling submission concerning the product cited above:

The glove requirement for "applicators and other handlers" in the "Personal Protective Equipment" section on your proposed labeling is missing or incorrect. Remove the incorrect requirement (if any) and add "Waterproof gloves". The exact location is shown in Sections A and B on Part 1 of the Product Worksheet in Supplement Three-A to PR Notice 93-7.

Remove the statement "Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application." from its current position within the Agricultural Use Box and place it above the Agricultural Use Box.

The glove requirement for early entry in the Agricultural Use Requirements box on your proposed labeling is missing or incorrect. Remove the incorrect requirement (if any) and add "Waterproof gloves". The exact location is shown in Sections F and G on Part 2 of the Product Worksheet in Supplement Three-A to PR Notice 93-7.

Delete the crossed-out statements on your proposed label. They are redundant statements or phrases.

Correct the typographical errors circled on your proposed label.

DREXEL  
SIMAZINE 80W

Pre-emergence control of many annual broadleaf weeds and grasses  
in agricultural and ornamental crops.

ACTIVE INGREDIENT:

Simazine: 2-chloro-4, 6-bis(ethylamino)-s-triazine.....80%

INERT INGREDIENTS:.....20%

TOTAL:.....100%

KEEP OUT OF THE REACH OF CHILDREN  
CAUTION

EPA REG. NO: 19713-46  
EPA EST. NO: 19713-~~MS~~-1

STATEMENT OF PRACTICAL TREATMENT

IF SWALLOWED: Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.

IF SPLASHED IN EYES: Immediately flush eyes with plenty of water and get medical attention.

IF SPILLED ON SKIN: Immediately ~~remove contaminated clothing, including shoes,~~ <sup>delete</sup> and wash skin with soap and plenty of water. If irritation develops, send for physician.

Manufactured By:  
DREXEL CHEMICAL COMPANY  
P.O. BOX 9306,  
MEMPHIS, TENN. 38109-0306

WPS DELETIONS/REVISIONS

ACCEPTED  
with COMMENTS  
In EPA Letter Dated

MAR 17 1994

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act  
as amended, for the pesticide  
registered under EPA Reg. No.  
19713-46

**PRECAUTIONARY STATEMENTS****HAZARDS TO HUMAN AND DOMESTIC ANIMALS**

**CAUTION:** Causes eye and skin irritation. Do not get in eyes, on skin, or on clothing. Wash thoroughly with soap and water after handling and before eating or smoking. Remove and wash contaminated clothing before reuse. Harmful if swallowed. Avoid inhalation of dust and contamination of food and feed. Do not apply this product in such a manner as to directly or through drift expose workers or other persons. The area being treated must be vacated by unprotected persons.

**PERSONAL PROTECTIVE EQUIPMENT**

Applicators and other handlers must wear:  
 Long-sleeved shirt and long pants  
 Shoes plus socks

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

**USER SAFETY RECOMMENDATIONS**

User should:

Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

**ENVIRONMENTAL HAZARD**

Simazine is a chemical which can travel (seep or leach) through soil and enter groundwater which may be used as drinking water. Simazine has been found in groundwater as a result of its use as a herbicide. Users of this product are advised not to apply simazine where the water table (groundwater) is close to the surface and where the soils are very permeable, i.e., well drained soils such as loam sands. Users are advised to consult with their local agricultural agencies to obtain information on the location of groundwater and the type of soil in their area. For terrestrial uses, do not apply directly to water or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water by cleaning of equipment or disposal of wastes. Do not apply when weather conditions favor drift from areas treated.

**DIRECTIONS FOR USE:**

It is a violation of federal law to use this product in a manner inconsistent with its labeling.

For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

**BEST AVAILABLE COPY**

**AGRICULTURAL USE REQUIREMENTS**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

Coveralls

Shoes plus socks

**CHEMIGATION**

Apply this product only through sprinkler (including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move) irrigation systems. Do not apply this product through any other type of irrigation system. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.

If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Public water system means a system for the provision of the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.

Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option



to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use the metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock. Do not apply when wind speed favors drift beyond the area intended for treatment.

Information regarding agitation, time of pesticide application during water application and mixing instructions, is included in Sprinkler Chemigation statements.

The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Do not apply when wind speed favors drift beyond the area intended for treatment.

**PRE-EMERGENCE OR POSTEMERGENCE:**

Apply Simazine 80W alone, or in tank mixtures with other herbicides on this label which are registered for center pivot application, with irrigation water. Apply either after planting before crop and weeds emerge, or after crop emergence, but before lay-by (20 to 30 inches) and before weeds exceed 1.5 inches in height. Apply at rates recommended on this label. Prepare mixture with minimum of 1 part water to 1 part product. Injecting a larger volume of a more dilute slurry per hour will assure more accurate calibration of metering equipment. Maintain sufficient agitation to keep herbicide in suspension. Meter slurry into irrigation water during entire period. Apply in 1/2 to 1 inch of water. Use the lower water volume on coarser textured soils, the higher volume on finer textured soils. More than 1 inch of water may reduce weed control by moving herbicide below the effective zone in the soil. Inject dilute slurry into system through a positive displacement pump.

**Precautions:**

1. Apply only through irrigation systems containing anti-siphon and check valves to prevent contamination of well during shutdown and overflow of solution.
2. Inject ahead of any right angle turn in the main line to insure adequate mixing.
3. Chemical injection pumps and water pumps must have interlocking controls to insure simultaneous shutoff.
4. Application when drift may occur from windy conditions, when system joints and connections are leaking, or when nozzles are not providing uniform distribution may cause crop injury.
5. Where sprinkler distribution patterns do not overlap sufficiently, unacceptable weed control may result. Where sprinkler distribution patterns overlap excessively, crop injury may result.

**FARM-WORKER-SAFETY-STATEMENTS**

~~Do-not-enter-treated-areas-without-protective-clothing-until sprays-have-dried.~~

~~Because-certain-states-may-require-more-restrictive-reentry intervals-for-various-crops-treated-with-this-product, consult your-State-Department-of-Agriculture-for-further-information. Written-or-oral-warnings-must-be-given-to-workers-who-are expected-to-be-in-a-treated-area-or-in-an-area-about-to-be treated-with-this-product.-Oral-warnings-must-inform-workers-of areas-or-fields-that-may-not-be-entered-without-specific protective-clothing-until-sprays-have-dried,-and-appropriate cautions-to-take-in-case-of-accidental-exposure,-as-described under-Precautionary-Statements-on-this-label.-When-oral-warnings are-given,-warnings-shall-be-given-in-a-language-customarily understood-by-the-workers.-Oral-warnings-must-be-given-if-there is-reason-to-believe-that-written-warnings-cannot-be-understood by-workers.-Written-warnings-must-include-the-following information: CAUTION.-Area-treated-with-Simazine-on-(date-of application).-Do-not-enter-without-appropriate-protective clothing-until-sprays-have-dried.-In-case-of-accidental-exposure~~

flush-eyes-or-skin-with-plenty-of-water.--Call-physician-if irritation-persists.--Remove-and-wash-contaminated-clothing-before reuse-

Simazine 80W is a herbicide that should be applied before weeds emerge or following removal of weed growth. It controls a wide variety of annual broadleaf and grass weeds when used at selective rates in agricultural and ornamental crops. When used at higher, nonselective rates in noncrop areas, it also controls many perennial broadleaf weed and grasses.

Where a range of application rates is given, use the low rate on coarser textured soil and soil lower in organic matter; use the high rate on finer texture soil and higher in organic matter.

Simazine Herbicide enters weeds mainly through their roots, moisture needed to move it into the root zone. Very dry soil conditions and lack of rainfall following application may necessitate shallow cultivation, or rotary hoeing. Simazine 80W is noncorrosive to equipment and nonflammable.

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#### ANNUAL WEEDS CONTROLLED

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alyssum	lambquarters
Amaranthus spp.	mustard
annual bluegrass	nightshade
annual morningglory	peppergrass
annual ryegrass	peppergrass
barnyardgrass	pigweed
Brachiaria spp.	pineapple weed
burclover	prickly lettuce
carelessweed	purslane
carpetweed	*quackgrass
common chickweed	ragweed
crabgrass	rattail fescue
downy brome	redmaids
fall panicum	Russian thistle
fiddleneck	shepherdspurse
filaree	shieldcress
fireweed	silver hairgrass
fivehook bassia	smartweed
Flora's paintbrush	spanishneedles
Florida pursley	speedwell
foxtails	tansymustard
goosegrass	wild mustard
groundsel	wild oat
henbit	wiregrass
junglerice	witchgrass
knawel	yellow flower pepperweed

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\*See specific use directions

**EQUIPMENT**

**Ground Application:** Use conventional spray equipment with 80\* fan-type nozzles. Screens in nozzles as well as those in suction and in-line strainers, should be no finer than 50 mesh. Use hydraulic or mechanical agitation during mixing and application to maintain a uniform suspension. Use a pump with capacity to maintain 35 to 40 psi at the nozzles. If hydraulic agitation is used, the pump should also provide sufficient agitation in the tank to keep the mixture in suspension. Wash sprayer thoroughly with clean water immediately after use.

**Aerial Application:** Use aerial application only where specified in the use directions. Screens in nozzles as well as those in suction and in-line strainers should be no finer than 50 mesh. Avoid application under conditions where uniform coverage cannot be obtained or where excessive spray drift may occur. Avoid application directly to animals or humans. Although it is unnecessary for flagmen or loaders to wear protective clothing or equipment, care should be taken to avoid inhalation of dust or spray mist, or prolonged contact with skin. Flagmen and loaders should wash thoroughly before eating at the end of each day's operation.

Wash sprayer thoroughly with clean water immediately after use.

**MIXING INSTRUCTIONS**

Make a slurry by adding Simazine 80W to a small amount of waste in a separate container. Then pour the slurry into the spray tank partially filled with clean water, and add the rest of the water.

**Ground Application:** Where the amount of water is not specified, apply Simazine 80W in 20 to 40 gals. of water per acre.

**Aerial Application:** Use a minimum of one gal. of water for each 1 to 1 1/2 lbs. of wetttable powder applied per acre, unless otherwise specified.

**BAND TREATMENT**

The amount of Simazine 80W needed for band treatment may be calculated by the formula:

$$\frac{\text{band width in inches}}{\text{row width in inches}} \times \text{broadcast rate per acre} = \text{amount}$$

**FRUIT AND NUT CROPS**

Apply the spray to the orchard or vineyard floor avoiding contact with fruit, foliage, or stems. Make application only to orchards or groves where trees have been established one year or more. Make only one application per year, except as noted otherwise. Recommended rates are based on broadcast treatment. For band applications or spot applications around trees in fruit or nut plantings, reduced the broadcast rate of Simazine 80W and water per acre in proportion to the area actually spray

**Precaution:** DO NOT APPLY TO SANDY SOILS

**APPLES, PEARS, SOUR CHERRIES:** Apply 2 1/2 to 5 lbs. per acre.

**AVOCADOS (California only):** Apply 2 1/2 to 5 lbs per acre after final preparation of grove.

**BLUEBERRIES AND CANEBERRIES (Blackberries, Boysenberries, Loganberries, Raspberries):** Apply 2 1/2 to 5 lbs. per acre in the spring or apply a split application of 2 1/2 lbs. per acre in the spring plus 2 1/2 lbs. per acre in the fall. Apply in a minimum of 40 gals.. of water per acre.

On plantings less than 6 months old use 1/2 the above rate. Do not apply when fruit is present.

**QUACKGRASS CONTROL:** Apply 5 lbs. per acre in the fall or split the application applying 2 1/2 lbs. per acre in the fall plus 2 1/2 lbs. per acre in the spring, when quackgrass is actively growing.

#### **CRANBERRIES**

**Massachusetts:** Apply up to 5 lbs. per acre either before spring growth begins or in the fall after harvest.

**Other areas:** Apply 2 1/2 lbs per acre before spring growth begins.

**FILBERTS (Oregon and Washington only):** Apply 2 1/2 lbs. per acre in the fall or apply a split application of 2 1/2 lbs. per acre in the fall plus 2 1/2 lbs. per acre in the spring. Do not apply when nuts are on the ground during the harvest period. Do not use on sandy soil.

**Note:** If trees are planted on a hillside, excessive soil erosion may result from the elimination of weeds.

**GRAPES:** Apply 2 1/2 to 6 lbs. per acre any time between harvest and early spring. Do not use in vineyards established less than three years.

#### **GRAPEFRUIT, LEMONS, ORANGES**

**Arizona (Lemons and Oranges only):** Apply a split application of 2 lbs. per acre in the spring plus 2 lbs. per acre in the fall.

**California:** Apply 2 1/2 to 5 lbs. per acre. Do not use in the Imperial, Coachella, or Palo Verde Valleys.

**Florida (Grapefruit and Oranges only): (RIDGE AREAS)** Apply only once per year. For control of weeds listed under General Information, apply 8 to 12 lbs. per acre in the spring; to control milkweed vine, use 10 to 12 lbs. per acre either pre-emergence or before vines are 12 inches tall. Complete control of milkweed vine may require repeat application over a period of 2 to 3 years. **(BEDDED AREAS)** Apply 4 lbs. per acre in bedded areas to control balsam apple vine and other weeds. Apply prior to periods of major weed seed germination in the soil where moisture conditions are good. Apply only once per.

**Texas(Grapefruit and Oranges only):** Apply 5 to 6 lbs per acre.

**Note (All Areas):** Do not use in nurseries. Do not apply to bedded grapefruit, lemons or oranges except for Florida grapefruit and oranges. Do not apply to trees under stress from freeze damage for one year after the freeze.

**MACADAMIA NUTS:** Apply 2 1/2 to 5 lbs. in 50 gals. of water per acre before harvest and just prior to weed emergence. Repeat application as necessary. Do not apply when nuts are on the ground during the harvest period.

**OLIVES:** Apply 2 1/2 to 5 lbs. per acre following grove preparation in the fall. Repeat annually in midwinter.

**PEACHES, PLUMS, SWEET CHERRIES:** Apply 2 to 5 lbs. per acre. Apply in late fall to early spring prior to weed emergence.

**Peaches:** Use only in Ark., La., Mo., Okla., Tex., and the states east of the Mississippi River.

**Plum and Sweet Cherries:** Use only in Mo. and states east of the Mississippi River except Tenn.

Do not apply to sandy or gravelly soil.

**PECANS:** Apply the appropriate rate in the following table before weeds emerge in the spring.

SOIL TEXTURE	RATE PER ACRE
Sand, loamy sand	DO NOT USE
Sandy Loam	2 1/2 lbs.
Loam or clay soil low in organic matter	2 1/3 to 3 1/2 lbs
Clay soil high in organic matter	3 1/2 to 5 lbs.

Do not use west of the Pecos River in Texas or in New Mex., Ariz., or Ca. do not make applications to transplanted trees that have been established less than two year in the grove as injury may occur. Do not apply when nuts are on the ground. Do not allow animals to graze treated areas.

**STRAWBERRIES: (Oregon and Washington):** For control of chickweed, groundsel, mustard and shepherdspurse, apply broadcast 1.25 lbs. per acre. In fields where overhead irrigation is used to activate this product, apply after harvest at time of bed renovation. In fields where overhead irrigation is not available, apply during early October through November.

**Note:** Make only one application per growing season. Do not apply within 4 months after transplanting.

**WALNUTS:** Apply 2 1/2 to 5 lbs per acre. Do not apply when nuts are on the ground. Do not apply to sandy soil. Leveling and furrowing operations after application will lessen effectiveness of weed control.

**SIMAZINE HERBICIDE 80W PLUS PARAQUAT CL TANK MIX COMBINATION**

Simazine 80W plus Paraquat CL tank mix combinations are effective in apple, peach, and pear orchards for kill of existing vegetation and for residual control of the annual broadleaf, weeds and grasses listed under General Information. This combination is also effective for top kill and suppression of perennial weeds.

Apply the rates shown in the following table as a tank mix in 50 to 200 gals. of water per acre to the orchards floor avoiding contact with fruit, foliage or stems. Add a nonionic surfactant at the rate of 1/2 per 100 gals. Apply when the weeds and grasses are succulent and the new growth is from 1 to 6 inches tall. Make only one application per year. Make applications only in orchards or groves where trees have been established one year or more. Do not spray under windy conditions and use a shield for young trees. Do not allow animals to graze treated areas.

Since Simazine enters weeds mainly through their roots, rainfall or irrigation is needed to move it into the root zone

CROP	BROADCAST* RATE PER ACRE	
	SIMAZINE 80W	PARAQUAT CL
Apples	2 1/2 to 5 lbs.	1 to 2 qts.
Pears	2 1/2 to 5 lbs.	1 to 2 qts.
Peaches**	2 to 5 lbs.	1 to 2 qts.

In the table above, use the low rate on coarse textured soil and low organic matter soil. Use the high rate on fine textured soil and high organic matter soil.

\*For band applications or spot applications around trees, reduce the broadcast rate and the amount of water in proportion to the areas actually sprayed.

\*\*Do not apply to peaches on sandy or gravelly soils. Use on peaches only in Arkansas, Louisiana, Missouri, Oklahoma, Texas, and states east of the Mississippi River.

**FIELD AND FORAGE CROPS**

**CORN:** Nitrogen solutions or complete liquid fertilizers may replace all or part of the waters as a carrier for Simazine 80W. Do not apply after corn has emerged as there is danger of liquid fertilizers causing crop injury.

**Pre-emergence:** Apply before weeds and corn emerge. Use the appropriate rate in the table below.

**Preplant:** Apply in the spring after plowing at the appropriate rate in the table below. Apply before, during or after final seedbed preparation. If soil is tilled or worked after application, avoid deep incorporation of Simazine 80W. Best results will be obtained when Simazine 80W. Best results will be obtained when Simazine 80W is applied within 2 weeks before planting.

Note: Under dry weather conditions, preplant applications may give better weed control than pre-emergence.

SOIL TEXTURE	BROADCAST* RATE PER ACRE
COARSE-TEXTURED SOIL: Sand, silt, and loam that is low in organic matter	2 1/2 lbs.
MEDIUM-TEXTURED SOIL: Soil containing a moderate amount of clay and organic matter	3 lbs.
FINE-TEXTURED SOIL: Loam that is high in organic matter and clay (including dark prairie soils of Corn Belt)	3 3/4 lbs.
ORGANIC SOIL: Peat, muck, and high-organic clay	5 lbs.

\*For calculation of band treatment rate, see Information section.

QUACKGRASS CONTROL: Apply 3 3/4 to 5 lbs. per acre in the fall. Plow two to three weeks later, or if erosion is a problem, delay plowing until spring. Do not plant any crop except corn in the spring following treatment. Do not graze treated area. If weeds develop, particularly under relatively dry conditions, a shallow cultivation will generally result in better weed control.

**Note:**

1. Do not apply more than 5 lbs. of Simazine 80W per acre to corn in any one year.
2. Land treated with Simazine should not be planted to any crop except corn until the following year as injury may occur.
3. After harvest of a treated crop, plow and thoroughly till the soil in fall or spring to minimize possible injury to spring-seeded rotational crops, regardless of the rate used.
4. If more than 3 3/4 lbs. of Simazine 80W is used per acre (or equivalent rate in a band), a crop of untreated corn should precede the next rotational crop.
5. Do not apply Simazine 80W preplant incorporated in corn in the High Plains and Intermountain areas of the West (including central and western Kansas, western Nebraska western Oklahoma, and the Panhandle of Texas) where rainfall is sparse and erratic or where irrigation is required.
6. In the High Plains and Intermountain areas of the West where rainfall is sparse and erratic or where irrigation is required, use Simazine 80W to control weeds in corn only when corn is to follow corn or a crop of untreated corn is to precede another rotational crop.
7. In western Minnesota and eastern parts of the Dakotas, Nebraska, and Kansas, do not plant soybeans following corn treated with Simazine if more than 2 1/2 lbs. of Simazine 80W



per acre (or equivalent rate in a band) was applied as injury may occur.

8. Do not plant sugar beets, tobacco, vegetables (including dry beans), spring-seeded small grains, or small-seeded legumes and grass the year after Simazine 80W application as injury may occur.

**SUGARCANE:** Apply 2 1/2 to 5 lbs. per acre at planting or after harvest if ratoon crop is to be grown, but before weeds or sugarcane emerge. Simazine 80W may also be applied interline-directed or over the sugarcane to provide continuing control of germinating weeds.

**Note:**

1. Do not apply more than one 2 1/2 to 5 lb. application over the plants or more than two interline-directed applications.
2. Do not apply after "close-in."
3. Total application should not exceed 12 1/2 lbs. per acre crop cycle.

Do not feed or graze treated forage to livestock.

**NURSERIES, CHRISTMAS TREE PLANTING, SHELTER BELTS**

**NURSERIES (SEE LIST BELOW):** Apply 2 1/2 to 3 3/4 lbs. in at least 25 gals. of water per acre in fall or spring at least one year after transplanting.

**CHRISTMAS TREE PLANTING AND SHELTER BELTS (SEE LIST BELOW):**

Remove weed growth before application. Apply 2 1/2 to 5 lbs. in at least 25 gals. of water per acre after transplanting. Use the same rate for annual maintenance applications.

**QUACKGRASS CONTROL:** Apply 5 lbs. per acre in the fall or apply a split application of 2 1/2 lbs. per acre in early spring, after quackgrass begins growth.

**Caution:**

1. Do not use Simazine on seedbeds or cutting beds.
2. Do not apply to Christmas tree or shelter belt transplants less than three years of age.
3. Do not apply more than once a year, except as directed for quackgrass control.

APPLY SIMAZINE 80W TO THESE SPECIES OF TREES AND SHRUBS, AS RECOMMENDED ABOVE:

American elm	Mugho pine
Austrian pine	Norway spruce
arborvitae	Oregon grape
balsam fir	(Mahonia spp.)
barberry	red cedar
blue spruce	red oak
boxelder	red pine
bush honeysuckle	(Norway pine)
caragana	red spruce
cottoneaster	Russian olive
dogwood	Scotch pine
Douglas fir	Siberian elm
Fraser fir	white cedar
hemlock	white pine
honey locust	white spruce
juniper	yew (Taxus spp.)

**TURF GRASSES FOR SOD**

**ST. AUGUSTINE, CENTIPEDE, ZOYSIA GRASS:** Apply 2 1/2 to 5 lbs. per acre, according to soil texture as indicated below.

Muck or Peat	5 lbs.	Old beds:	within 2 days after lifting of sod
		New beds:	3 to 4 days after sprigging or plugging
Sandy Soil	2 1/2 lbs.	Old beds:	within 2 day after lifting of sod
		New beds:	7 to 10 days after sprigging or plugging

Apply an additional 2 1/2 lbs. on muck or peat, or 1 1/4 lbs. on sandy soil if weed growth recurs.

**Caution:**

1. Do not apply within 30 days before cutting or lifting.
2. Do not use north of North Carolina.

**TURFGRASS FOR FAIRWAYS, LAWNS SOD PRODUCTION\* AND SIMILAR AREAS**  
\*In state other than Florida

**BERMUDAGRASS, CENTIPEDEGRASS, ST. AUGUSTINEGRASS, AND ZOYSIA GRASS:** Apply after October 1 prior to emergence of winter annual weeds for control of bluegrass, burclover, carpet burweed, chickweed, corn speedwell, henbit, hop clover, and spurweed. Simazine 80W will control annual bluegrass even if it is emerged at the time of treatment. For control of summer annual weeds listed in the General Information portion of this label, also apply Simazine 80W in late winter before weeds emerge. Apply in a minimum of 15 gallons of water per acre or 1 gallon per 1,000 sq. ft.

Where annual bluegrass is the major weed, use 1.25 lbs. per acre (0.5 oz. per 1,000 sq. ft.). Use 2.5 lbs. per acre (1 oz. per 1,000 sq. ft.) for control of other weeds named above. Do not exceed 1.25 lbs. per acre per treatment on newly sprigged turfgrass or on hybrid Bermudagrass such as Tiflawn, Tifway, and Ormond.

For continued summer annual weed control, apply another 1.25 lbs. per acre at least 30 days after the previous application, but not after April 15. do not make more than two applications per year.

**Note:** On newly sprigged turfgrass and hybrid bermudagrass, temporary slowing of growth and yellowing may occur following application. Use only on turf grass reasonably free of infestation of insects, nematodes, and diseases. Do not use on golf greens. Do not use north of North Carolina (except may be used in Virginia Coastal Plains) or west of the high rainfall areas of eastern Oklahoma and eastern Texas. Do not use on muck or alkaline soils. Do not apply over the rooting area of trees or ornamentals not listed on this label. Do not overseed with desirable turfgrass within 4 months before or 6 months after treatment. Do not apply to newly seeded bermudagrass until it has overwintered and has a well developed rhizome system. Do not exceed 2.4 lbs. product per acre within 12 months of seeding bermudagrass.

#### VEGETABLE CROPS

**ASPARAGUS (established):** Apply 2 1/2 to 5 lbs. per acre to beds established one year or more. Apply once per year either after disking in the spring before weeds emerge, or following harvest after removal of existing weed growth. Spring application must be made at least 3 days before first cutting.

**Caution:** (Washington and Oregon only)

1. Do not use on sand, loamy and, or gravelly areas of fields as crop injury may result.
2. Do not allow irrigation water to stand or to form pools in the field as injury may occur.

**ARTICHOKEs:** Apply 2 1/2 to 5 lbs. per acre as a directed spray after the last fall tillage.

**Caution:**

1. Do not apply to sandy soil.
2. Apply only once per year.

#### NONSELECTIVE WEED CONTROL ON NONCROP LAND

Best results are obtained when Simazine 80W is applied before weeds emerge. If weed growth has begun and removal is not feasible, include a contact or translocated herbicide in the spray.

Simazine 80W can be used to provide long-term weed control on industrial sites, highway medians and shoulders, railroad rights-of-way, lumber yards, petroleum tank farms, and in noncrop areas on farms, such as around buildings, equipment and fuel storage

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areas, along fences, road-sites, and lanes. Aerial applications may be made where it is feasible.

Use at least 1 gal. of water for each 1 lb. of Simazine 80W; use more water if practical for both ground and aerial applications.

**TO CONTROL ANNUAL BROADLEAF AND GRASS WEEDS** (including barnyardgrass, cheat, crabgrass, lambsquarters, foxtail, ragweed, puncturevine, and turkey mullein): Apply 6 to 12 1/2 lbs. per acre.

**TO CONTROL MOST ANNUAL AND MANY PERENNIAL BROADLEAF AND GRASS WEEDS** (including quackgrass, bluegrass, redtop, burdock, Canada thistle, orchardgrass, purple top, smooth brome, dogfennel, and plantain): Apply 12 1/2 to 25 lbs. per acre.

**TO CONTROL HARD-TO-KILL PERENNIAL WEEDS** (including bull thistle and sow thistle): Apply 25 to 50 lbs. per acre.  
For longer residual control in regions of high rainfall and a long growing season, apply 25 to 50 lbs. per acre.

#### STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

#### STORAGE INSTRUCTIONS:

Storage should be under lock and key and secure from access by unauthorized persons and children. Storage should be in a cool dry area away from any heat or ignition source. Avoid storage at high temperatures. Do not stack over 2 pallets high. Move bags carefully so as not to tear or puncture. Do not move containers from one area to another unless they are securely sealed. Keep container tightly sealed when not in use. Do not allow material to become wet or store in a damp, humid area. Keep away from any puncture source. Avoid storage near water supplies, food, feed and fertilizer to avoid contamination. Store in original container only. If the contents are leaking or material is spilled follow these steps:

1. Collect and place in suitable containers for disposal.
2. Wash area with water and soap to remove remaining pesticide.
3. Follow washing with clean water rinse.
4. Do not allow run off to enter sewer or contaminate water supplies.
5. Dispose of waste as indicated below:

**PESTICIDE DISPOSAL:** Waste resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**CONTAINER DISPOSAL:** Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

**WARRANTY-CONDITION OF SALE**

OUR RECOMMENDATIONS FOR USE of this product are based upon test believed reliable. Follow directions carefully. Timing and method of application, weather and crop conditions, mixtures with other chemicals not specifically recommended, and other influencing factors in the use of this product are beyond the control of the seller. Buyer assumes all risks of use, storage and handling of this material not in strict accordance with directions given herewith. In no case shall Drexel or the Seller be liable for consequential, special or indirect damages resulting from the use or handling of this product when such use and/or handling is not in strict accordance with directions given herewith. The foregoing is a condition of sale by Drexel Chemical Company and is accepted as such by the Buyer.